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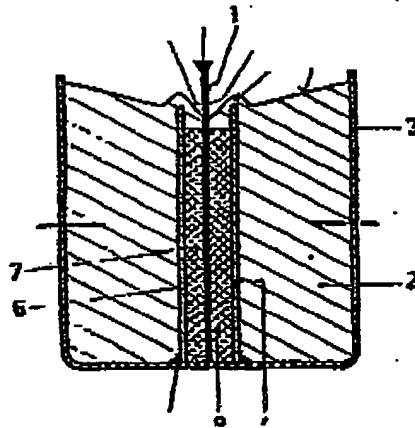
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CANDLE

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The candle base (2) of a candle consisting of wax, stearin or the like is held in a deep cup (3). A metal tube (4) connected to the bottom of the cup (3) has a lengthwise slot (6). The inner space of the tube (7) holds an absorbent body (8), which holds the wick (1), which projects outward at the top. The candle flame burns uniformly at the upper end of the tube (4) during the entire burning time of the candle. The heat generated by the candle flame is transmitted downward via the metal tube (4) and liquefies the candle base material, so that it can be absorbed upward by the absorbent body (8) to the wick (1).



### Claims

1. A candle with a wick held in a wick holder and a candle base of wax, stearin or the like, which is held in a deep cup, which is characterized by the fact that the wick holder is a metal tube (4) that extends over nearly the entire height of the candle base (2) and is punctured through on the side, the inside space of the tube (7) between the wick (1) and the tube (4) contains an absorbent body (8), and the absorbent body (8) ends below the upper edge of the tube (4).

2. A candle as in Claim 1, which is characterized by the fact that the absorbent body (8) consists of cotton material.

3. A candle as in Claim 1, which is characterized by the fact that the wick (1) and the absorbent body (8) connectedly consist of absorbent material.

4. A candle as in Claim 3, which is characterized by the fact that the wick (1) and the absorbent body (8) together consist of at least one wound layer (13) of a woven material, non-woven material or knitted material.

5. A candle as in Claim 1, which is characterized by the fact that the metal tube (4) has a lengthwise slot (6).

6. A candle as in Claim 1, which is characterized by the fact that the upper side of the candle base (2) has an upper projecting bulge (9) over the upper edge of the tube (4) and a recess (10) around the wick (1).

7. A candle as in Claim 6, which is characterized by the fact that the upper side of the candle base (2) falls away from the wall of the cup (3) towards the bulge (10).

8. A candle as in Claim 1, which is characterized by the fact that the wick (1) is provided with a metal insert (1a) or a sheathing of thin wire.

9. A candle as in Claim 1, which is characterized by the fact that the wick tip (1b) is made broad by pinching it.

10. A candle as in Claim 1, which is characterized by the fact that the laterally punctured tube (4) is provided with a transverse slot (6a) near its upper end.

11. A candle as in Claims 5 and 10, which is characterized by the fact that the transverse slot (6a) extends on both sides of the lengthwise slot (6) in the metal tube (4).

The invention concerns a candle with a wick held in a wick holder and a candle base of wax, stearin or the like, which is held in a deep cup.

Such candles are known in various embodiments, for example as the so-called tealights. The cup surrounding the candle base serves to prevent lateral flow of the candle base material that has become liquid. To hold the wick sufficiently even as the material of the candle base progressively becomes liquefied, the wick is held by its lower end in a wick holder, which in the case of the well-known tealight consists of a piece of metal resting on the bottom of the cup to which the lower end of the wick is anchored. The length of the wick that projects above the liquid candle base material becomes larger as the liquid level falls until the upper end of the wick begins to burn away. The free wick length that is established in this way is in general too long for optimum steady burning so that a relatively large flickering candle flame that tends to form carbon black is produced.

In the case of long and narrow candles, there is no need to provide a wick holder, since the wick is sufficiently held in the part of the candle base that has not yet become liquid. If such candles are made slender it is in general not possible to prevent a part of the liquid material from flowing down after a certain initial burning time; the candle will drip. Because of this, the consumption of material is increased and this promotes the formation of a free wick segment that is too long, which again leads to large flickering candle flames. A cup or similar candle casing to hold the liquid material cannot be used while the candle is burning; the descending candle flame would be cut off from a sufficient supply of oxygen by the wall of the cup. The cup wall also has an adverse affect on the supply of oxygen in the case of tealights that are provided with a cup and of similar candles after the candle flame has descended after a lengthy burning time. This effect also leads to an irregular, somewhat smoking candle flame.

Therefore, the task of the invention is to create a candle of the kind mentioned at the start that burns during its entire burning time with a steady, relatively small and therefore non-smoking candle flame. In particular, a limitation of candle consumption and thus longer

burning time for a given candle size are supposed to be achieved by the small uniform candle flame.

This task is solved in accordance with the invention by the fact that the wick holder is a laterally punctured metal tube extending over nearly the entire height of the candle base, the inner space of the tube between the wick and the tube contains an absorbent body, and the absorbent body ends below the upper edge of the tube.

The absorbent body surrounding the wick which is soaked with liquid candle base material as the candle burns, conveys the material, because of its absorbent affect, continuously to the upper end of the tube, where the candle flame burns. The metal tube conducts the heat of the candle flame to the bottom of the cup and into the candle base, so that even the last residue of the candle base at the bottom of the cup will still become liquefied at the end of the burning time of the candle, even though the candle flame continuously remains at the same height, specifically at the upper end of the tube. The liquefied candle base material makes its way through the penetrations in the tube, for example a lengthwise slot, into the inner space of the tube and is absorbed by the absorbent body.

The size of the candle flame is determined by the length of the segment of wick projecting upward from the absorbent body and the tube and remains unchanged during the entire burning time. The size of the candle flame can be chosen so that while a sufficient lighting effect is achieved, smoking is excluded. The candle flame burns steadily and uniformly; candle consumption is low so that a relatively long burning time is achieved. Since the candle flame does not descend, the supply of oxygen is not adversely affected by the cup wall even at the end of the burning time.

When used as Christmas tree candles, there is the particular advantage that the candles in accordance with the invention are shorter than traditional Christmas tree candles and therefore the distance of the flame of these candles to adjacent branches will be greater and will not change. After being completely consumed the candles burn out safely.

This eliminates the danger that a Christmas tree candle that was not dangerously close to combustible branches or the like when it was lit will change its position after burning for a while and in this way could become dangerously close to an adjacent branch.

The candles are also especially suitable for arrangement in a candle holder, candelabrum, or the like, since their height and plane size do not change during the entire burning time and since the candles do not drip or run, so that the candle residues after they have burned completely can easily be removed from the candle holder or candelabrum. If candles are situated close to one another, as for example in a multi-arm candelabra, chandelier or the like, there is no danger that the candles will deform adjacent candles, possibly ones burning with a flame that is too

large. All in all considerably improved operational safety is obtained in all applications of candles.

Other advantageous embodiments of the notion of the invention are the objects of additional dependent claims.

The invention is illustrated in more detail below by means of embodiment examples, which are represented in the drawings.

Here:

Figure 1 shows an unused candle in a lengthwise cross section,

Figure 2 shows a section along line II-II in Figure 1,

Figure 3 shows the candle as in Figure 1 during burning, where one possible closed embodiment of the cup is indicated by dot-dash lines

and

Figure 4 is a layer of absorbent material for making a wick with surrounding absorbent body.

The candle shown in Figures 1 to 3 has a vertical wick 1 in the middle, which for example consists of cotton fabric, as is traditional. A candle base 2 of wax, stearin or preferably a mixture of these that is conventional for candle material is held in a thin walled deep cup 3, that which consists, for example, of metal or plastic. The wick 1 stands in a metal tube 4 that extends nearly over the entire height of the candle base 2, and that forms a wick holder and is connected at its lower end to the bottom of cup 3, for example by a heat-resistant adhesive 5. The tube 4 is provided over its entire length with a lateral slot 6, which forms a penetration through which the liquid candle base material can penetrate into the inner space 7 between the wick 1 and tube 4. This candle inner space 7 contains an absorbent body 8, which, for example, also consists of cotton fabric.

When the candle has not yet been used (Figure 1), an upward projecting bulge 9 of candle base material is provided on the upper side of the candle base 2 over the upper edge of tube 4. Around the free end of wick 1 the surface of the candle base material has a recess 10, which is deepest at wick 1. The upper side of the candle base 2 that lies outside of tube 4 has a conical surface 11 that descends slightly from the wall of cup 3 to bulge 9.

Lighting the candle is made easier by this initial shape of the candle surface, which the wick 1 projects from the surface of the candle base material with sufficient length. As soon as wick 1 has been lit, liquefied candle base material begins to flow to it.

Figure 3 shows that with further progressive burning of the candle a large part of the candle base 2 in the vicinity of tube 4 has become liquefied. The wick is held by the tube 4 that is affixed to the bottom of the cup and absorbent body 8 that surround the wick 1. The candle flame 12 burns unaltered and with uniform size at the upper end of tube 4, until all of the candle base

material has become liquefied and consumed. Even when only a small residue of candle base material still remains at the bottom of dish 3, sufficient amount of heat is transmitted from the candle flame 12 to the bottom of the dish through the metal tube 4, which consists of sheet brass, for example, to keep the candle base material liquid. In this way it can be conveyed through the absorbent body 8 by its absorbent action upward to the candle flame 12.

In Figure 3 the dot-dash lines show that the cup 3 can even be largely enclosed on its top side with a cover 13. The cover 13 keeps liquid candle base material from flowing out of cup 3 even if the candle becomes significantly tilted. One can see from Figure 3 that the cover 13 has a central hole 14, through which the wick 1 passes. This hole 14 is situated at a small distance from the upper edge of tube 4, in order to leave room for the bulge 9 indicated in Figure 1 above the upper edge of tube 4.

Instead of the described separate embodiment of wick 1 and absorbent-body 8 of cotton fabric which can be processed together with hemp fibers, for example, the wick 1 and the absorbent body 8 can be made connectedly of absorbent material in order to simplify manufacture. As a possible embodiment, Figure 4 shows a layer 15 of absorbent material such as a woven material, non-woven material or knitted material, which can be wound so that a strip 15a that sticks out forms the part of the wick that projects upward, while the remaining part of the wound layer forms the absorbent body 8.

The wick 1 can consist of any absorbent, but non-melting material. To keep the wick tip from breaking off when being relit, the tip can be provided with a metal insert 1a or sheathing of thin wire. Lighting is facilitated if the wick tip 1b is pressed to make it flat and wide.

The dash line in Figure 3 shows that a transverse slot 6a can be provided at the upper end of tube 4, which preferably extends on both sides of the lengthwise slot 6 and after lighting the candle allows improved inflow of candle base material into the inner part of tube 4.

